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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,150	01/15/2002	Boaz Nitzan	P-6138-US	8860

7590 01/30/2004
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EXAMINER

WEBB, GREGORY E

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 01/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/045,150

Examiner

Gregory E. Webb

Applicant(s)

NITZAN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 12-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 112803 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The following action is in response to the applicant's election dated 11/12/03. The applicant has elected claims 1-11 for examination. The remainder of the claims will be withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4-8, 10, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hwang et al (US 4,070,322).
4. Hwang teaches a method for printing on a non-absorbent surface such as vinyl (see col. 2, lines 3-20). Hwang teaches the use of solvents such as ketones as a swelling agent (see col. 2, lines 27-38) and ionizable salts including multivalent salt such as alkali earth metal salts (see col. 2, lines 63-68).
5. Hwang incorporates the use of resins but fails to teach the acrylic resin of instant claim 9 (see col. 3, lines 23-35).
6. Hwang teaches the addition of various other solvents meeting the applicant's limitation to a "coalescence reagent" including alcohols, pyrrolidone and ethers (see col. 5, lines 39-53).

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7. Hwang further teaches the rubbing of the printed section in either the wet or dry state (see col. 5, lines 12-27).
8. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Song (US 4,892,775).
9. Song teaches ink composition for printing on non-porous surfaces including vinyl (see col. 2, lines 1-20).
10. Song teaches the use of various solvents meeting the applicant's limitation for swelling agent and coalescing agent (see col. 3, lines 20-41).
11. Song further teaches the use of conductive species including multivalent salts such as alkaline earth metal halides (see col. 3, lines 55-65).
12. Song uses resin binders in the composition including acrylic resins (see col. 2, lines 45-68 and col. 3, lines 1-7).
13. Concerning the applicant's limitation to a specific thickness, although the prior art does not discuss this limitation, the prior art would inherently meet this limitation. Typical ink coatings such as those printing on this action range from less than 1 micron to at most 10 micons. Thus the applicant's claimed range of thickness would not be unusual for printing processes. For example, US3689768 teaches the following (see paragraph 25):

"(25) Then, the opposite surface of the film was coated with a gelatino fine silver chlorobromide grain emulsion in a dry thickness of 5 microns to provide a recording layer. Thereafter, polyvinyl acetate dyed with a black dye was applied to the recording layer in a dry thickness of 0.6 micron. The coating liquid for the polyvinyl acetate layer used above had the following composition: Black dye, GrasoI Fast Black G (made by Geigy AG) 10 parts Polyvinyl acetate 50 parts Methanol 200 parts."

14. Similarly, US3926548 teaches the following (see paragraph 31):
 - Undyed cut pieces of the both yarns (treated and untreated) were prepared and dyed with the above-mentioned ddye. The cross-section of each of them was

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observed. Both were dyed in quite the same depth of color. It was observed under a microscope, however, that the surface layer of the yarn treated with the dye-reserving agent was not dyed. The thickness of the dye-reserving layer of the treated yarn was about 1 micron when observed by means of microscopic photographs of the cross-sections of the fibers.

15. Therefore the examiner does not see a particular novelty in the range of thickness for this ink printing process.

Conclusion

16. Although none of the instant claims have been found to be allowable, the examiner did not find many references where the substrate was non-porous and the ink contained a multivalent metal salt. It is suggested that the applicant further limit both the polymer swelling agent and the coalescence agent to a specific Markush group of compounds such as those listed in the specification with the exclusion of those solvents taught in the prior art.

17. Similarly, when the applicant's pretreatment composition is examined (i.e. claims 12-29) it is suggested that the applicant more specifically define the metal salt and the solvents. It is also suggested that the ink composition of non-elected claim 12 should actually require ink or dye as a component of the ink system. Without requiring the inclusion of ink in non-elected claim 12, the examiner is not sure if the invention as claimed is actually functional.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory E. Webb whose telephone number is 703-305-4945. The examiner can normally be reached on 9:00-17:30 (m-f).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 703-308-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

A handwritten signature in black ink, appearing to read 'G. Webb', with a large, stylized initial 'G'.

Gregory E. Webb
Primary Examiner
Art Unit 1751

gw